

Hands On Science Outreach (HOSO)

Goal Area of the Activity: **Increasing Public Understanding**

Summary: HOSO works with both parents and teachers, primarily after school (but not always) for children from Pre-k to 6th. HOSO programs provide activity guides, materials and training bound together as units for quality control, ease of use, and convenience. The program is nationwide, with offices based in Silver Spring, MD. Classes meet in 8-week sessions in the fall, winter and spring. Summer materials work well either by themselves or as components of summer camps or other ongoing activities.

The imbedded data collection encourages mathematical thinking through counting, graphing and analysis at age appropriate levels. Adult Leaders, who are often not professional teachers (but sometimes are) practice asking questions, working on developing evidence, analyzing results and enjoying the pleasure of science---the joyful brain exercise of finding things out systematically.

Purpose: The primary purpose of HOSO programs is to provide an avenue for increased participation in science enrichment for children when they are developing their interests and sense of capacity for the future. A secondary purpose is to engage community members in working along with the children to continue their own learning and to share their enthusiasm for science and mathematics as an avocation as well as a potential career. HOSO programs increase the public understanding of science/mathematics by their presence: (What is science? How do we do it? What are the results? What do they mean to us?)

Accomplishment/Results: Using registration data for its 23-year history, there have been hundreds of thousands of children and tens of thousands of adults who have participated. They have used simple materials to explore the opportunities for science in their everyday lives. Continuing programs have a science enrichment presence in their midst. HOSO has developed an evolving three-year cycle of activities for four different age/grade groups. The enrichment curriculum touches upon a wide variety of topics in which science/math play a role. The MATHSTART series for Pre-K (an NSF funded project) provides nursery and Head Start teachers with activities focused on Number, Geometry and Probability. The project evaluation indicated that teachers learned along with their young students.

Plans for the next 12 months: HOSO continues to conduct Coordinator trainings to prepare community leadership to replicate its programming. There are four scheduled trainings in Silver Spring to coincide with the Montgomery County, Maryland trainings and the expertise of veteran Adult Leaders. There are additional trainings scheduled by community request in other parts of the country. HOSO seeks grants to cover training expenses and to help support programming in communities where its minimal fees are roadblocks to participation. *Were funding to be available, develop new early childhood math material for parents*